REMARKS

Examiner T. T. Doan is thanked for a complete search and thorough Office Action.

The newly added claims 21-23 which were not entered because they were rejected by the Examiner under 35 U.S.C. 112 as containing subject matter which was not described in the specification is acknowledged.

Claims 1, 3, 10, and 16 are currently amended for the following reasons.

The specification cites SiO_2 and Al_2O_3 as the wide-band-gap insulators. The cited reference, Journal of Applied Physics, Vol. 89, No. 10, May 15, 2001, page 5243, Table 1 on page 5254, identifies these materials as having band gaps greater than 8.0 eV. Claims 1 and 16 are amended to narrow those claims to include silicon dioxide. Claim 3 is amended to identify the SiO_2 as having a band gap of greater than about 8 eV. Claim 10 is amended to narrow the claim to have an Al_2O_3 having a band gap of greater than about 8 eV.

Additional amendments were made to be more consistent with the specification. In claim 1, line 7, the word first is inserted because it was omitted in the original submission. In claim 1, line 10 the word on replaces the

word [over].

Claim 10, line 6, after the word "oxide," the word on replaces the word [over] to be consistent with the specification. On line 7, after the word "electrodes" the following is inserted: , whereby said aluminum oxide has a band gap greater than about 8 eV to distinguish the applicant's invention from Yoon et al. Yoon et al. uses a group of secondary dielectric materials that include not only SiO_2 and Al_2O_3, but also include TiO_2 and a Si_3N_4, which have band gaps that are much lower (3.5 eV for TiO_2, and 5.1 eV for Si_3N_4). See Yoon's claim 5, col. 6, that does not limit the layers to the applicant's wide-band-gap layers. Therefore Yoon's invention directs one away from the applicant's invention.

Claim 10, line 10, the word first is inserted after the word "said" and line 13, after the word "oxide" the word on replaces [over]. On line 14, after the word "film" the following is inserted: , whereby said aluminum oxide has a band gap greater than about 8 eV to further distinguish the claim from Yoon et al.

Claims 19 and 20 are amended by replacing [17] with 16 to properly reflect the independent claim 16.

Reconsideration of the rejection of claims 1-2, 4, 8, and 16-19 under 35 U.S.C. 103(a) as being unpatentable over Alers et al. (6,320,244) in view of Liou et al. (6,017,790)

is respectfully requested for the following reasons.

The Examiner states that Alers et al. use TiO_2, and that Liou et al. teach a metal oxide, such as TiO_2, is a wide-band-gap insulating material, in col. 4, lines 45-48. In col. 4, lines 45-48, Liou recites "TiO_2, Ta_2O_5, Fe_2O_3, and $BaTiO_3$ are wide band gap insulating materials." The TiO_2 has a band gap of 3.5 eV, and Ta_2O_5 has a band gap of 4.5 eV. These band gaps are substantially less than the applicant's intended wide band gap of greater than 8 eV, as stated in currently amended claim 3. Therefore, these references direct one away from the applicant's invention.

Claims 2, 4, 8, and 17-19 are dependent claims that do not stand on their own merits but support their respective independent claims.

Since claims 1 and 16 are amended to narrow those claims to include silicon dioxide, they are non-obvious and patentable over Alers et al. in view of Liou et al.

Reconsideration of the rejection of claims 3, 5-7, 9-15, and 20 under 35 U.S.C. 103(a) as being unpatentable over Alers et al. (U.S. Patent 6,320,244) in view of Yoon et al. (U.S. Patent 5,688,724) is respectfully requested for the following reasons.

To paraphrase from a previous response (01/27/03), Alers et al. use a relatively high dielectric constant layer, such as TiO_2, ZrO_2, and RuO_2. Alers et al. do not direct one toward the use of a lower dielectric constant insulator having a wide band gap. One would not be

motivated from Yoon et al. to substitute an Al_2O_3 insulator for the TiO_2 insulating layer in Alers et al. Therefore, since Alers et al. do not teach the applicant's invention, then Alers et al. in view of Yoon et al. do not make obvious the applicant's invention claim 10. To further distinguish the applicant's claimed invention, claim 10 is currently amended to include a phrase that explicitly defines the Al_2O_3 as having a band gap of greater than about 8 eV as stated in the Applied Physics Review quoted above.

Claims 3, 5-7, 9, 11-15, and 20 are dependent claims that do not stand on their own merits, but support their respective independent claims.

Reconsideration of the rejection of claims 1 and 16 under 35 U.S.C. 103(a) as being unpatentable over Hisatomi et al. (U.S.Patent 6,163,050) in view of Ovshinsky et al. (U.S. Patent 4,766,471) is respectfully requested for the following reasons.

Hisatomi's invention is for forming an EPROM which has an upper and a lower polysilicon electrode with an intervening chlorine-doped oxide and an ONO layer to improve the dielectric breakdown when a high electric field is applied to the upper electrode of the EPROM. Hisatomi's method and structure are not relevant to the applicant's invention. In Ovshinsky et al. an optical device is described which consists of forming an optical conduit on a substrate for light transmission between a light emitter

and a light detector. Ovshinsky's patent has no relevance to the applicant's invention. Therefore, the invention is non- obvious and patentable over Hisatomi et al. in view of Ovshinsky et al.

It is requested that the Examiner T. T. Doan call the undersigned Attorney at (845) 452-5863 should there be anything that can be done to help bring this Patent Application to Allowance.

Respectfully submitted,

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